UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,202	04/26/2001	George H. Forman	10010075-1	2153

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EXAMINER
HIRL, JOSEPH P

ART UNIT	PAPER NUMBER
2121	

DATE MAILED: 03/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/844,202	FORMAN ET AL.
	Examiner	Art Unit
	Joseph P. Hirl	2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _15 December 2003_.
2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-20_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) _1-20_ is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on _15 December 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to an AMENDMENT entered December 15, 2003 for the patent application 09/844,202 filed on April 26, 2001.

2. The First Office Action of October 23, 2003 is fully incorporated into this Final Office Action by reference.

3. The claims and only the claims form the metes and bounds of the invention. "Office personnel are to give the claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris,* 127 F.3d 1048, 1054-55, 44USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. *In re Prater,* 415 F.2d, 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969)" (MPEP p 2100-8, c 2, l 45-48; p 2100-9, c 1, l 1-4). The Examiner has full latitude to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

4. Examiner's Opinion:

Para 3 above applies. When the inventive step is obvious to one of ordinary skill in the art, the disclosure fails on the test for non obviousness.

Status of Claims

5.   Claims 1, 16, 18 and 19 are amended. Claims 1-20 are pending.

Response to Arguments

6.   Page 9 of the applicant's December 15, 2003 response indicates that claim 11

was amended. Page 6 of the same response indicates that claims 11 was not

amended. In the spirit of compact prosecution, it will be assumed that claim 11 was not

amended. Applicant is required to confirm this assumption with the response to this

office action.,

7.   The objections to the drawings are withdrawn.

8.   The objections to the specification are withdrawn.

9.   Applicant's arguments filed on December 15, 2003 related to Claims 1-20 have

been fully considered but are not persuasive.

In reference to Applicant's argument:

Amended claim 11 depends from claim 10 and recites that the scrutiny classifier is generated on-the-fly
from a set of training records corresponding to the selected subset of classes. With respect to claim 11,
the Examiner has asserted that "on-the-fly" is sequential to item 26 of Fig. 1 and therefore conveys no
further limitation." Contrary to the Examiner's assertion, however, "on-the-fly" further limits claim 10 by
specifying that the scrutiny classifier is generated "on-the-fly" rather than, for example, "generated
beforehand in anticipation of a new instance to be classified," as described in the specification on page 7,
line 6, through page 8, line 16. That is, claim 11 further limits claim 10 because claim 11 does not cover
methods within the scope of claim 10 in which the scrutiny classifier is not generated on-the-fly.

Examiner's response:

The technique of "on-the-fly" is used four times in the specification but is not

defined in the specification. Similarly, "on-the-fly" is not defined in Merriam-Webster's

Collegiate Dictionary, Tenth Edition. Under the conditions of para 3 above, there is

precedent determination and consequently "on-the-fly" provides no limitation of claim 11

to claim 10.

In reference to Applicant's argument:

Claim 14 depends from claim 13 and recites the step "further comprising selecting an inclusive class set
encompassing the selected subset of classes from which to generate the scrutiny classifier." Regarding
claim 14 the Examiner has asserted that "selecting an inclusive class set encompassing the selected
subset of classes" conveys no further limitation. None of the antecedent claims from which claim 14
depends, however, specifies the step of selecting an inclusive class set. Therefore, contrary to the
Examiner's assertion, claim 14 further limits the subject of the antecedent claims from which it depends
because claim 14 does not cover methods within the scope of the antecedent claims in which the step of
selecting an inclusive class set is not performed.

Examiner's response:

Para 3 above applies. An inclusive class set encompassing the selected subset

of classes from which to generate the scrutiny classifier covers all classes including the

class that has all classes. Since the inclusive class set is specifically claimed in claim

13 and thereby selected, claim 14 provides no further limitation.

In reference to Applicant's argument:

Claim 18 depends from claim 16 and recites that the system further comprises an inducer configured to
generate a scrutiny classifier. Claim 18 further limits claim 16 because it does not cover systems within
the scope of claim 16 that do not include an inducer as recited in claim 18.

Examiner's response:

Para 3 above applies. From the specification at page 1, lines 18, 19, "A

classifier typically is constructed by an inducer, which is an algorithm that builds the

classifier from a training set." Since the inducer is a classifier and an algorithm, the

inducer is indistinguishable from the classifier. Hence, claim 18 provides no limitations

to that of claim 16.

In reference to Applicant's argument:

Claim 19 depends from claim 18 and recites that the inducer is configured to generate the scrutiny classifier on-the-fly from a set of training records corresponding to the selected subset of classes. With respect to claim 19, the Examiner has asserted that "on-the-fly" is sequential to item 26 of Fig. I and therefore conveys no further limitation." Contrary to the Examiner's assertion, however, "on-the-fly" further limits claim 18 by specifying that the scrutiny classifier is generated "on-the-fly" rather than, for example, "generated beforehand in anticipation of a new instance to be classified," as described in the specification on page 7, line 6, through page 8, line 16. That is, claim 19 further limits claim 18 because claim 19 does not cover methods within the scope of claim 10 in which the scrutiny classifier is not generated on-the-fly.

Examiner's response:

Refer to the above discussion of on-the-fly.

In reference to Applicant's argument:

Regarding Claims 1-20

The Examiner merely asserts that the "nature and character of this filter are fundamental to the workings of the invention and without such disclosure, one of ordinary skill in the art would have to exercise undue experimentation to achieve the successful workings of this invention." The Examiner, however, fails to provide a rational basis as to why the disclosure does not teach the manner and process of making and using the invention of claims 1-20 to one of ordinary skill in the art, without undue experimentation, and dealing with subject matter that would not already be known to the skilled person as of the filing date of the application.

None of claims 1-20 specifically recites a record filter. The Examiner has failed to explain why the "nature and character of this filter are fundamental to the workings of the invention" recited in claims 1-20. Contrary to the Examiner's assertion, the record filter 36 per se is not "fundamental to the workings of the invention" recited in claims 1-20. The record filter 36 is described in the context of one embodiment of the invention. Other embodiments within the scope of the claims do not require such a record filter. For example, in some embodiments, the inducer used to generate the scrutiny classifier may simply select the set of training records corresponding to a class set inclusive of the subset of classes selected by the ballpark classifier for a given instance either directly from the entire training records set 18 or by giving no weight to the training records in set 18 that do not correspond to a class set inclusive of the subset of classes selected by the ballpark classifier for the given instance.

In addition, the specification teaches that:

> Scrutiny classifier 20 is generated by second inducer 22 from a second set of training records corresponding to the subset of classes selected by ballpark classifier 14 (step 34). The second training records subset may be identified by applying a record filter 36 to the entire training records set 18.

The Examiner has failed to explain why one skilled in the art could not implement a record filter that can be applied to the entire training records set 18 to identify training records corresponding to the subset of classes selected by ballpark classifier 14. To provide such functionality, the record filter simply has to select training records from the entire training records set 18 with class labels matching the classes selected by the ballpark classifier 14. Anyone skilled in the art at the time of the invention readily could have designed such a record filter.

Examiner's response:

The applicant admits that the specification is silent on the configuration of the record filter 36.

From specification at page 6, lines 27-31:

Scrutiny classifier 20 is generated by second inducer from a second set of training records corresponding to the subset selected by ballpark classifier 14 (step 34). The second training records set 24 may be identified by applying a record filter 36 to the entire training records set 18.

Applicant has agreed to this teaching in the response dated December 15, 2003 at page 13. Both the Applicant and the Examiner agree that the record filter is important to the development of the scrutiny classifier and in consequence to claims 1-20. Further, the Examiner asserts that the distribution of the members of second training set is important to the functioning of the scrutiny classifier 20. The record filter 36 will establish such distribution. Without disclosure as to how such distribution is to be established, undue extermination will be necessary on the part of one of ordinary skill in the art in the implementation of the invention.

In reference to Applicant's argument:

The general rule is that the subject matter required to enable the invention need only be found in the application and/or the prior art for the application to be enabling under Section 1 12, first paragraph.

As explained in the preceding section, the specification teaches that record filter 36 is applied to the entire training records set 18 to identify training records corresponding to the subset of classes selected by ballpark classifier 14. The specification explains that, "in one embodiment, the training records set 18 corresponds to a database table containing a list of attributes, one of which is designated as a class label attribute" (page 6, lines 12-14). To provide the functionality of the record filter 36 described in the specification, the record filter 36 simply has to select training records from the entire training records set 18 with class labels matching the classes selected by the ballpark classifier 14. Anyone skilled in the art at the time of the invention readily could have designed such a record filter (see, e.g., Ben Forta, Sams Teach Yourself SQL in 10 Minutes, SAMS, 2nd edition (April 26, 2001)).

U.S. Patent No. 5,930,803 (copy attached in Appendix) is one example of a prior art reference that describes the use of a record filter in a data classifier. The '803 patent describes an approach to visualizing an evidence classifier that includes an importance slider that "permits a user to control the filtering of attributes to a classification of unlabeled records" (col. 10, lines 26-28). The '803 patent explains that (col. 10, lines 25-36):

> Importance is a measure of the predictive power with respect to a label. For example, an evidence inducer can assign importance value in a range from 0 to 100. As slider 430 is shifted away from zero toward the right-hand side of display 400, attributes that fall below the importance slider are removed from display view 415. If attributes are sorted by importance, then attributes at the bottom of the sort are removed first.

That is, in the approach of U.S. Patent No. 5,930,803, a record filter filters from a data set used to classify unlabeled records based on importance values that are assigned to the attributes of the records in the data set. Such a record filter may provide the functionality of the record filter 36 described in the present application simply by assigning an importance value greater than the threshold to class label attributes corresponding to the subset of classes selected by ballpark classifier 14 for a given instance and assigning an importance value less than the threshold to other record attributes. Thus, one of ordinary skill in the art at the time of the invention readily could have designed a record filter with the functionality of the record filter 36 described in the present application as evidence by the teachings of U.S. Patent No. 5,930,803 (cited in the Form PTO 1149 filed herewith).

Examiner's response:

The record filter and the inducer are separate and distinct entities (specification, Fig. 1). If the record filter 36 was so inconsequential to the implementation of the invention, why was it discussed in the detailed description of the invention? Why is the record filter the center of Fig. 1.? The Examiner asserts that the sophistication of the record filter establishes the effectiveness of the Scrutiny Classifier and without knowing through the disclosure "how to", the value of this invention is severely limited. Patents

are only assigned when the invention is novel and non obvious. A simple record filter

will accordingly establish an obvious scrutiny classifier not worthy of a patent.

In reference to Applicant's argument:

Regarding Claims 1-20

The Examiner merely asserts that "without such disclosure [regarding misclassification cost], one of ordinary skill would have to exercise undo experimentation to achieve the successful workings of this invention." The Examiner, however, fails to provide a rational basis as to why the disclosure in the present application does not teach the manner and process of making and using the invention of claim 7 to one of ordinary skill in the art, without undue experimentation, and dealing with subject matter that would not already be known to the skilled person as of the filing date of the application.

The specification teaches that (page 7, lines 3-15; emphasis added):

> In one embodiment, the size of the ballpark class set 26 may be tailored to accommodate explicit statements about the cost of misclassification, a cost that may vary widely depending upon the nature of the classification application. For example, for an application such as pre-cancer detection, the cost of a misclassification may be extremely high. That is, erroneously labeling a healthy tissue as pre-cancerous may be corrected when further tests are performed, whereas labeling a pre-cancerous tissue as healthy may lead to disastrous consequences. Accordingly, for such applications, the size of the ballpark class set 26 maybe increased based upon the magnitude of the misclassification cost until a desired classification sensitivity is achieved. For other applications, such as text classification, the misclassification cost may be relatively low, in which case the size of the ballpark class set 26 may be relatively small. An appropriate cost function may be incorporated into first inducer 16 in a conventional way.

The Examiner has failed to explain why one skilled in the art could not select the subset of classes to which an instance is determined most likely to belong based at least in part upon a prescribed misclassification cost, as recited in claim 7, based on the teachings provided in the Specification of the present application. To incorporate misclassification cost into the selection of the subset of classes to which an instance is determined most likely to belong, one skilled in the art at the time of the invention would merely have to specify a relationship between the classes selected and a specified cost of misclassification. Anyone skilled in the art at the time of the invention readily could have incorporated misclassification cost into the selection of the subset of classes to which an instance is determined most likely to belong based on the disclosure in the present application.

Examiner's response:

The Applicant's quotes both from the Examiner's First Office Action and from the

specification provide ample evidence that the specification as written does not provide

sufficient "how to" to enable one of ordinary skill in the art to implement this disclosure

such that the result achieves a performance level merited from an invention that is novel

and non obvious. Specification statements such as "An appropriate cost function may be incorporated into inducers in a conventional way" simply adds nothing in advancing the state of the art.

In reference to Applicant's argument:

As explained above, the specification teaches that (page 7, lines 3-15)

> In one embodiment, the size of the ballpark class set 26 may be tailored to accommodate explicit statements about the cost of misclassification, a cost that may vary widely depending upon the nature of the classification application. For example, for an application such as pre-cancer detection, the cost of a misclassification may be extremely high. That is, erroneously labeling a healthy tissue as pre-cancerous may be corrected when further tests are performed, whereas labeling a pre-cancerous tissue as healthy may lead to disastrous consequences. Accordingly, for such applications, the size of the ballpark class set 26 may be increased based upon the magnitude of the misclassification cost until a desired classification sensitivity is achieved. For other applications, such as text classification, the misclassification cost may be relatively low, in which case the size of the ballpark class set 26 may be relatively small. An appropriate cost function may be incorporated into first inducer 16 in a conventional way.

To incorporate misclassification cost into the selection of the subset of classes to which an instance is determined most likely to belong, as recited in claim 7, one skilled in the art at the time of the invention would merely have to specify a relationship between the classes selected and a specified cost of misclassification. Anyone skilled in the art at the time of the invention readily could have incorporated misclassification cost into the selection of the subset of classes to which an instance is determined most likely to belong based on the disclosure in the present application.

Alternatively, one skilled in the art at the time of the invention could have incorporated misclassification cost into the selection of the subset of classes to which an instance is determined most likely to belong, as recited in claim 7, based on, for example, the teachings provided in Pedro Domingos, "MetaCost: A General Method for Making Classifiers Cost-Sensitive," Proceedings of the Fifth International Conference on Knowledge Discovery and Data Mining, San Diego, CA, ACM Press, pp. 155-164, 1999 (cited in the Form PTO 1149 filed herewith).

Examiner's response:

If everything regarding misclassification cost is so simple and "obvious", what is the basis under which one can justify the patentability of claim 7?

In reference to Applicant's argument:

The preamble of independent claim I has been amended so that the subject matter of the claim is directed to a machine-implemented method of classifying an instance into one or more classes selected from a set

of potential classes. Independent claim 1 therefore is limited to a practical application within the technological arts because the claimed invention as a whole produces a practical application by producing a concrete, tangible, and useful result (see, e.g., MPEP § 2106 IV.B.I (b)). For this reason, independent claim 1 is directed to statutory subject matter under 35 U.S.C. § 101.

Claims 2-15 depend from independent claim 1 and therefore also are drawn to statutory subject matter.

The preamble of independent claim 16 has been amended so that the subject matter of the claim is directed to a data processing system for classifying an instance into one or more classes selected from a set of potential classes. Independent claim 16 therefore is limited to a practical application within the technological arts because the claimed invention as a whole produces a practical application by producing a concrete, tangible, and useful result (see, e.g., MPEP § 2106 IV.B.1(b)). For this reason, independent claim 16 is directed to statutory subject matter under 35 U. S. C. § 101.

Claims 17-19 depend from independent claim 16 and therefore also are drawn to statutory subject matter.

Examiner's response:

The 35 USC 101 rejection of claims 1-15 is withdrawn. However, the rejection of claims 16-19 remain since a data processing system is not tangibly embodied in the technical arts.

In reference to Applicant's argument:

The Examiner has rejected independent claims 1, 16, and 20 under 35 U.S.C. § 102(b) over Fujisaki (U.S. 5,835,633). In particular, the Examiner has asserted that:

> Fujisaki anticipates selecting from the set of potential classes a subset of two or more classes to which the instance is determined to most likely belong (Fujisaki, c 1, 1 8-18); and applying to the instance a scrutiny classifier generated from a set of training records corresponding to a class set inclusive of the selected subset of classes to identify at least one class to which the instance most likely belongs (Fujisaki, c 1, 1 8-I 8).

> Contrary to the Examiner's assertion, however, Fujisaki does not teach or suggest the step of selecting from the set of potential classes a subset of two or more classes to which the instance is determined to most likely belong, nor does Fujisaki teach or suggest the step of applying to the instance a scrutiny classifier generated from a set of training records corresponding to a class set inclusive of the selected subset of classes to identify at least one class to which the instance most likely belongs. Rather, in Fujisaki's approach (col. 3, lines 1-18):

> > ... the pre-classifier network develops different probabilities that the input character falls into different predefined "groups" (also called "partitions" or "subsets") of characters. Four predefined groups of characters, for example, may comprise (1) upper-case alphabetic letters. (2) lower-case alphabetic letters, (3) numerical digits, and (4) special symbols such as "&" or

In contrast to the pre-classifier, each specialized network corresponds exclusively to a single group of characters. In performing its "fine" evaluation, a specialized network determines probabilities that the input character represents different predefined target characters of the specialized network's respective group. For instance, if a specialized network corresponds to a group comprising lower-case characters, the network develops probabilities that the input character corresponds to the members of its group, e.g., "a", "b", "c", etc.

That is, Fujisaki's classifier does select from the set of potential classes a subset of two or more classes to which the instance is determined to most likely belong. Instead, the preclassifier simply assigns probabilities to each of the groups (or classes) of characters. In addition, none of the specialized networks is generated from a set of training records corresponding to a class set inclusive of a subset of two or more classes selected by the preclassifier. Instead, each specialized network is generated from the members of a single respective group (of class) of characters.

Examiner's response:

Para 3 above applies. Examiner has full latitude to interpret each claim in the

broadest reasonable sense. As restated from the Applicants conclusions, 8 lines up,

"Fujisaki's classifier does select from the set of potential classes a subset of two or

more classes to which the instance is determined to most likely belong." Further, the

assignment of probabilities is a way of indicating "at least one class to which the

instance most likely belongs."

Claim Rejections - 35 USC § 101

10.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11.   Claims 16-19 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter. The practical application test requires that a

useful, concrete and tangible result be accomplished. Claims 1-19 represent abstract

methodology capable of being performed by hand and therefore not in the technological

art. The consequence is non-statutory.

Claim Rejections - 35 USC § 112

12.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the

manner and process of making and using it, in such full, clear, concise, and exact

terms as to enable any person skilled in the art to which it pertains, or with which

it is most nearly connected, to make and use the same and shall set forth the

best mode contemplated by the inventor of carrying out his invention.

Claims 16-19 are rejected under 35 USC 112, first paragraph because current

case law (and accordingly, the MPEP) require such a rejection if a 101 rejection is given

because when Applicant has not in fact disclosed the practical application for the

invention, as a matter of law there is no way Applicant could have disclosed how to

practice the undisclosed practical application. This is how the MPEP puts it:

> ("The how to use prong of section 112 **incorporates as a matter of law** the requirement of
> 35U.S.C. 101 that the specification disclose as a matter of fact a practical utility for the
> invention.... If the application fails as a matter of fact to satisfy 35 U.S.C. 101, then the application
> **also fails as a matter of law** to enable one of ordinary skill in the art to use the invention under
> 35 U.S.C. § 112."); In re Kirk, '376 F.2d 936, 942, 153 USIPQ 48, 53 (CCPA 1967) ("Necessarily,
> compliance with § 112 requires a description of how to use presently useful inventions,
> **otherwise an applicant would anomalously be required to teach how to use a useless
> inv ntion**."). See, MPEP 21107.01 (IV), quoting In re Kirk (emphasis added).

Therefore, claims 16-19 are rejected on this basis.

13.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

14.   Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specification at page 6, lines 30-31 cite: "The second training records set 24, may be identified by applying a record filter 36 to the entire training set 18." The specification is silent on the workings of the record filter. The nature and character of this filter are fundamental to the workings of the invention and without such disclosure, one of ordinary skill would have to exercise undo experimentation to achieve the successful workings of this invention. Further to claim 7 regarding "misclassification cost", the specification at page 7 lines 14 and 15 cite: "An appropriate cost function may be incorporated into inducers 16 in a conventional way." Again, without such disclosure, one of ordinary skill would have to exercise undo experimentation to achieve the successful workings of this invention.

Claim R jections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15.   Claims 1, 16 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by

Fujisaki et al (USP 5,835,633, referred to as **Fujisaki**).

Claims 1, 16, and 20

Fujisaki anticipates selecting from the set of potential classes a subset of two or

more classes to which the instance is determined to most likely belong (**Fujisaki**, c 1, l

8-18); and applying to the instance a scrutiny classifier generated from a set of training

records corresponding to a class set inclusive of the selected subset of classes to

identify at least one class to which the instance most likely belongs (**Fujisaki**, c 1, l 8-

18).

Conclusion

11.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

12.   Claims 1-20 are rejected

Correspondence Information

13.   Any inquiry concerning this information or related to the subject disclosure

should be directed to the Examiner, Joseph P. Hirl, whose telephone number is

(703) 305-1668. The Examiner can be reached on Monday – Thursday from

6:00 a.m. to 4:30 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the

Examiner's supervisor, Anil Khatri can be reached at (703) 305-0282.

Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks,

Washington, D. C. 20231;

or faxed to:

(703) 746-7239 (for formal communications intended for entry);

or faxed to:

(703) 746-7290 (for informal or draft communications with notation of

"Proposed" or "Draft" for the desk of the Examiner).

Hand-delivered responses should be brought to:
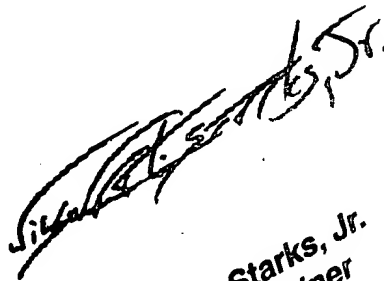
Receptionist, Crystal Park II

2121 Crystal Drive,

Arlington, Virginia.

Joseph P. Hirl

February 26, 2004

Wilbert L. Starks, Jr.
Primary Examiner
Art Unit - 2121